IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A peptide labeled with fluorine-18, comprising the following peptide sequence (PI) (SEQ ID NO: 18):

J^1-J^2-J^3-J^4-J^5-J^6-Asp-U^8-J^9-J^{10}-U^{11}-Arg-J^{13}-Ala-U^{15}-Lys-Gly-X^{18}-Gly-Thr-J^{21}-Glu-J^{23}-J^{24}-U^{25}-J^{26}-J^{27}-J^{28}-U^{29}-J^{30}-J^{31}-Arg-J^{33}-J^{34}-J^{35}-J^{36}-Arg-Gln-J^{39}-U^{40}-J^{41}-J^{42}-J^{43}-U^{44}-J^{45}-J^{46}-J^{47}-J^{48}-J^{49}-Arg-J^{51}-U^{52}-J^{53}-J^{54}-Asp-U^{56}-Lys-Ser-Z^{59}-Leu-J^{61}-Gly-J^{63}-J^{64}-$Z^{65}J^{66}$-J^{67}-U^{68}-J^{69}-J^{70}-J^{71}-U^{72}-J^{73}-J^{74}-Ser,

in which J, Z, U and X represent amino acids such that:

- the amino acids J are chosen independently of each other in such a manner that at least 50% of them are polar residues selected from the group consisting of Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Lys, Orn, Pro, Ser, Thr and Tyr;
- the amino acid J^1 is selected independently of the other amino acids of the sequence from the group consisting of Gly, Asp, Asn, Pro and His;
- the amino acid J^2 is selected independently of the other amino acids of the sequence from the group consisting of Phe and Gly;
- the amino acid J^3 is selected independently of the other amino acids of the sequence from the group consisting of Asp, Ser and Asn;
- the amino acid J^4 is selected independently of the other amino acids of the sequence from the group consisting of Glu, Ala, Pro and Val;
- the amino acid J^5 is selected independently of the other amino acids of the sequence from the group consisting of Arg, Glu, Ser, Met, Asn, Asp, Ile, and Leu;
- the amino acid J^6 is selected independently of the other amino acids of the sequence from the group consisting of Ala, Arg, Val, Glu, Gln and Pro;

- the amino acid J^{9} is selected independently of the other amino acids of the sequence from the group consisting of Glu, Leu, Gln and Lys;

- the amino acid J^{10} is selected independently of the other amino acids of the sequence from the group consisting of Thr, Asn, Ala, Ile, Val and Lys;

- the amino acid J^{13} is selected independently of the other amino acids of the sequence from the group consisting of Thr and Lys;

- the amino acid J^{21} is selected independently of the other amino acids of the sequence from the group consisting of Asp and Asn;

- the amino acid J^{23} is selected independently of the other amino acids of the sequence from the group consisting of Glu, Asp, Gln and Ala;

- the amino acid J^{24} is selected independently of the other amino acids of the sequence from the group consisting of Ser, Thr, Met and Ala;

- the amino acid J^{26} is selected independently of the other amino acids of the sequence from the group consisting of Leu, Val and Ile;

- the amino acid J^{27} is selected independently of the other amino acids of the sequence from the group consisting of Thr, Asn, Ser, Asp and Glu;

- the amino acid J^{28} is selected independently of the other amino acids of the sequence from the group consisting of Leu, Val, Cys and Ile;

- the amino acid J^{30} is selected independently of the other amino acids of the sequence from the group consisting of Thr, Ala, Gly, Ser and Lys;

- the amino acid J^{31} is selected independently of the other amino acids of the sequence from the group consisting of Ser, Asn, Glu, Tyr, His, Lys and Gly;

- the amino acid J^{33} is selected independently of the other amino acids of the sequence from the group consisting of Ser, Asn and Thr;

- the amino acid J^{34} is selected independently of the other amino acids of the sequence from the group consisting of Ser, Asn and Thr;

- the amino acid J^{35} is selected independently of the other amino acids of the sequence from the group consisting of Ala, Arg, Val, Asp, Thr and Lys;

- the amino acid J^{36} is selected independently of the other amino acids of the sequence from the group consisting of Gln and Glu;

- the amino acid J^{39} is selected independently of the other amino acids of the sequence from the group consisting of Glu, Asp, Leu, Gln, Lys and Thr;

- the amino acid J^{41} is selected independently of the other amino acids of the sequence from the group consisting of Ser, Ala, Val, Arg, Cys, Lys and Leu;

- the amino acid J^{42} is selected independently of the other amino acids of the sequence from the group consisting of Ala, Phe, Lys, Thr, Gln and Leu;

- the amino acid J^{43} is selected independently of the other amino acids of the sequence from the group consisting of Ala, Glu, Ser, Thr and Lys;

- the amino acid J^{45} is selected independently of the other amino acids of the sequence from the group consisting of Lys and Gln;

- the amino acid J^{46} is selected independently of the other amino acids of the sequence from the group consisting of Thr, Ala, Arg, Ser and Glu;

- the amino acid J^{47} is selected independently of the other amino acids of the sequence from the group consisting of Leu, Arg, Ala, Thr, His, Ser and Gln;

- the amino acid J^{48} is selected independently of the other amino acids of the sequence from the group consisting of Phe, Thr, Tyr and Ile;

- the amino acid J^{49} is selected independently of the other amino acids of the sequence from the group consisting of Gly and Lys;

- the amino acid J^{51} is selected independently of the other amino acids of the sequence from the group consisting of Asp and Glu;

- the amino acid J^{53} is selected independently of the other amino acids of the sequence from the group consisting of Leu, Ala, Lys, Ile, His, Thr and Glu;

- the amino acid J^{54} is selected independently of the other amino acids of the sequence from the group consisting of Asp, Ser, Ala, Thr, Lys and Glu;

- the amino acid J^{61} selected independently of the other amino acids of the sequence from the group consisting of Ser and Thr;

- the amino acid J^{63} is selected independently of the other amino acids of the sequence from the group consisting of Lys, His, Asn and Asp;

- the amino acid J^{64} is selected independently of the other amino acids of the sequence from the group consisting of Phe, Leu and Met;

- the amino acid J^{66} is selected independently of the other amino acids of the sequence from the group consisting of Lys and Arg;

- the amino acid J^{67} is selected independently of the other amino acids of the sequence from the group consisting of Leu, Val, Thr and Glu;

- the amino acid J^{69} is selected independently of the other amino acids of the sequence from the group consisting of Val and Leu;.

- the amino acid J^{70} is selected independently of the other amino acids of the sequence from the group consisting of Ala and Gly;

- the amino acid J^{71} is selected independently of the other amino acids of the sequence from the group consisting of Leu and Met;

- the amino acid J^{73} is selected independently of the other amino acids of the sequence from the group consisting of Lys, Thr, Arg, Met, Tyr and Asp;

- the amino acid J^{74} is selected independently of the other amino acids of the sequence from the group consisting of Pro, Thr and Arg;

- the amino acid X^{18} is chosen independently of the other amino acids of the sequence from Ala, Asn, Cys, Gln, Gly, His, Ile, Leu, Met, Phe, Ser, Thr, Trp, Tyr and Val;

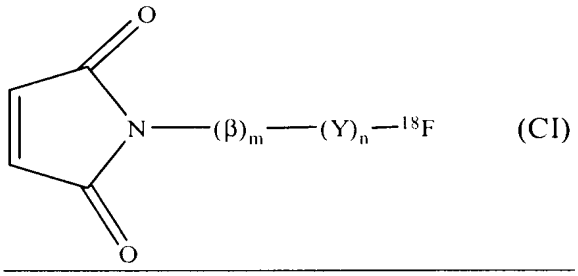
- the amino acids Z^{59} and Z^{65} are chosen independently from Glu, Asp, Lys and Arg,

- the amino acids U of the sequence (PI) are chosen according to one of the combinations a) to [[j)]] l) presented in Table 1 below:

	U^{8}	U^{11}	U^{15}	U^{25}	U^{29}	U^{40}	U^{44}	U^{52}	U^{56}	U^{68}	U^{72}
a)	Val	Leu	Met	Ile	Leu	Ile	Tyr	Leu	Leu	Val	Leu
b)	Ala	Ile	Ile	Ile	Leu	Ile	Tyr	Leu	Leu	Ile	Leu
c)	Ala	Ile	Ile	Ile	Leu	Ile	Tyr	Leu	Leu	Met	Val
d)	Ala	Leu	Met	Leu	Leu	Ile	Tyr	Leu	Leu	Ile	Met
e)	Ala	Leu	Met	Ile	Ile	Val	Tyr	Leu	Leu	Ile	Met
f)	Ala	Leu	Met	Ile	Ile	Ile	Phe	Leu	Leu	Ile	Met
g)	Ala	Leu	Met	Ile	Val	Ile	Phe	Leu	Leu	Ile	Phe
h)	Val	Leu	Met	Ile	Leu	Ile	Phe	Leu	Leu	Ile	Met
i)	Ala	Leu	Met	Ile	Leu	Ile	Phe	Leu	Leu	Ile	Met
j)	Ala	Leu	Met	Ile	Leu	Ile	Tyr	Leu	Leu	Ala	Ala
k)	Val	Leu	Met	Ile	Leu	Ile	Tyr	Leu	Leu	Val	Leu
l)	Val	Leu	Met	Ile	Leu	Ile	Phe	Leu	Leu	Val	Leu

wherein the superscripts of J, Z, U and X represent the positions of these amino acids in said sequence, and

wherein said peptide is labeled with a compound (CI) of general formula:



(CI)

in which:

- m represents an integer from 0 to 10;

- n represents an integer from 0 to 10;

- Y represents a group selected from the group consisting of alkyl, imidazolyl, pyrazolyl, benzimidazolyl, pyridinyl, piridazinyl, pyrimidinyl, pyrazinyl, triazinyl, quinolinyl, isoquinolinyl, cinnolinyl, quinazolinyl, quinoxalinyl and purinyl,

wherein Y may be optionally substituted with one or more substituents selected independently from the group consisting of hydrogen, nonradioactive halogen, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl, C_{1-6} alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl and trifluoromethyl groups;

- β represents a radical of formula:

$-(\gamma)_a-((CR_1R_2)_b-(V)_c)_d-((CR_3R_4)_e-(W)_f)_g-$

in which:

- a, b, c, d, e, f, g each independently represent an integer from 0 to 10;

- γ, V and W each independently represent $-NR_1-$, -O-, -S-, , ethynyl, $-CR_1=CR_2$, -(C=O)-, -(C=S)-, $-C(=NR_1)-$, -C (=O) O-, - (C=S) S-, -C ($=NR_1$) NR_2-, $-CR_1R_2-$, $-CR_1OR_2-$, $-CR_1NR_2R_3-$, where R_1, R_2, R_3 and R_4 are independently from the group consisting of hydrogen, halogens, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or

di(C_{1-6} alkyl)amino, mono-or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl (C_{1-6}) alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl and trifluoromethyl groups,

wherein compound (CI) is bound on an -SH group of said peptide sequence

~~A peptide labeled with fluorine-18, comprising the following peptide sequence (PI) (SEQ ID NO: 18):~~

~~J^1-J^2-J^3-J^4-J^5-J^6-Asp-U^8-J^9-J^{10}-U^{11}-Arg-J^{13}-Ala-U^{15}-Lys-Gly-X^{18}-Gly-Thr-J^{21}-Glu-J^{23}-J^{24}-U^{25}-J^{26}-J^{27}-J^{28}-U^{29}-J^{30}-J^{31}-Arg-J^{33}-J^{34}-J^{35}-J^{36}-Arg-Gln-J^{39}-U^{40}-J^{41}-J^{42}-J^{43}-U^{44}-J^{45}-J^{46}-J^{47}-J^{48}-J^{49}-Arg-J^{51}-U^{52}-J^{53}-J^{54}-Asp-U^{56}-Lys-Ser-Z^{59}-Leu-J^{61}-Gly-J^{63}-J^{64}-Z^{65}-J^{66}-J^{67}-U^{68}-J^{69}-J^{70}-J^{71}-U^{72}-J^{73}-J^{74}-Ser,~~

~~in which J, Z, U and X represent amino acids such that:~~

~~- the amino acids J are chosen independently of each other in such a manner that at least 50% of them are polar residues selected from the group consisting of Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Lys, Orn, Pro, Ser, Thr and Tyr,~~

~~- the amino acids J^1, J^3, J^{13}, J^{21}, J^{27}, J^{31}, J^{33}, J^{34}, J^{36}, J^{45}, J^{49}, J^{51}, J^{61}, J^{63}, J^{66}, and J^{74} are selected independently of each other from the group consisting of Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Lys, Orn, Pro, Ser, Thr and Tyr;~~

~~- the amino acid J^{26} is selected independently of the other amino acids of the sequence from the group consisting of Leu, Val and Ile;~~

~~- the amino acid J^{64} is selected independently of the other amino acids of the sequence from the group consisting of Phe, Leu and Met;~~

~~- the amino acid J^{69} is selected independently of the other amino acids of the sequence from the group consisting of Val and Leu;~~

- the amino acid J^{71} is selected independently of the other amino acids of the sequence from the group consisting of Leu and Met;

- the amino acid X^{18} is chosen independently of the other amino acids of the sequence from the group consisting of Ala, Asn, Cys, Gln, Gly, His, Ile, Leu, Met, Phe, Ser, Thr, Trp, Tyr and Val,

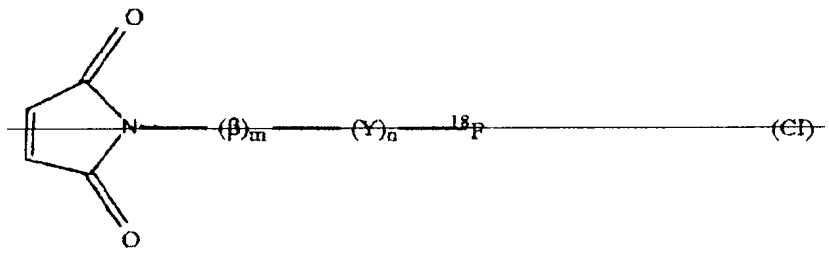
- the amino acids Z^{59} and Z^{65} are chosen independently from the group consisting of Glu, Asp, Lys and Arg,

- the amino acids U of the sequence (PI) are selected according to one of the combinations a) to j) presented in Table 1 below:

	U^{8}	U^{11}	U^{15}	U^{25}	U^{29}	U^{40}	U^{44}	U^{52}	U^{56}	U^{68}	U^{72}
Ex a)	Val	Leu	Met	Ile	Leu	Ile	Tyr	Leu	Leu	Val	Leu
Ex b)	Ala	Ile	Ile	Ile	Leu	Ile	Tyr	Leu	Leu	Ile	Leu
Ex c)	Ala	Ile	Ile	Ile	Leu	Ile	Tyr	Leu	Leu	Met	Val
Ex d)	Ala	Leu	Met	Leu	Leu	Ile	Tyr	Leu	Leu	Ile	Met
Ex e)	Ala	Leu	Met	Ile	Ile	Val	Tyr	Leu	Leu	Ile	Met
Ex f)	Ala	Leu	Met	Ile	Ile	Ile	Phe	Leu	Leu	Ile	Met
Ex g)	Ala	Leu	Met	Ile	Val	Ile	Phe	Leu	Leu	Ile	Phe
Ex h)	Val	Leu	Met	Ile	Leu	Ile	Phe	Leu	Leu	Ile	Met
Ex i)	Ala	Leu	Met	Ile	Leu	Ile	Phe	Leu	Leu	Ile	Met
Ex j)	Ala	Leu	Met	Ile	Leu	Ile	Tyr	Leu	Leu	Ala	Ala
Ex k)	Val	Leu	Met	Ile	Leu	Ile	Tyr	Leu	Leu	Val	Leu
Ex l)	Val	Leu	Met	Ile	Leu	Ile	Phe	Leu	Leu	Val	Leu

wherein the superscripts of J, Z, U and X represent the positions of these amino acids in said sequence, and

wherein said peptide is labeled with a compound (CI) of general formula:



~~in which:~~

~~- m represents an integer from 0 to 10;~~

~~- n represents an integer from 0 to 10;~~

~~- Y represents a group selected from the group consisting of alkyl imidazolyl, pyrazolyl, benzimidazolyl, pyridinyl, piridazinyl, pyrimidinyl, pyrazinyl, triazinyl, quinolinyl, isoquinolinyl, cinnolinyl, quinazolinyl, quinoxalinyl and purinyl,~~

~~wherein Y may be optionally substituted with one or more substituents selected independently from the group consisting of hydrogen, non-radioactive halogen, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl, C_{1-6} alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl, and trifluoromethyl groups;~~

~~- β represents a radical of formula:~~

$$(\gamma)_a-((CR_1R_2)_b-(V)_c)_d-((CR_3R_4)_e-(W)_f)_g-$$

~~in which:~~

~~- a, b, c, d, e, f, g each independently represent an integer from 0 to 10;~~

~~- γ, V and W each independently represent $-NR_1-$, $-O-$, $-S-$, $\begin{array}{c}O\\|\\N\end{array}$~~

~~ethynyl, $-CR_1=CR_2-$, $-(C=O)-$, $-(C=S)-$, $-C(=NR_1)-$, $-C(=O)O-$, $-(C=S)S-$, $-C(=NR_1)NR_2-$, $-CR_1R_2-$, $-CR_1OR_2-$, $-CR_1NR_2R_3-$, where R_1, R_2, R_3 and R_4 are independently from the group consisting of hydrogen, halogens, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl (C_{1-6})alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl, and trifluoromethyl groups;~~

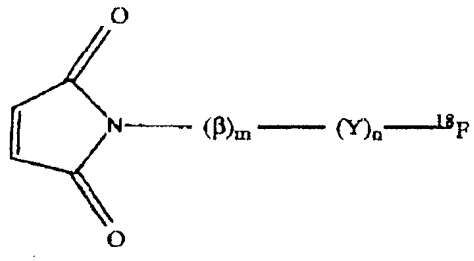
~~wherein compound (C1) is bound on an -SH group of said peptide sequence (P1).~~

Claims 2-3 (Cancelled)

Claim 4 (Previously Presented): The peptide labeled with fluorine-18 of claim 1 comprising:

a peptide sequence described by SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, or 14,

wherein said peptide is labeled with a compound (CI) of general formula:



(CI)

in which:

m represents an integer from 0 to 10;

n represents an integer from 0 to 10;

Y represents a group selected from the group consisting of alkyl, imidazolyl, pyrazolyl, benzimidazolyl, pyridinyl, piridazinyl, pyrimidinyl, pyrazinyl, triazinyl, quinolinyl, isoquinolinyl, cinnolinyl, quinazolinyl, quinoxalinyl, and purinyl,

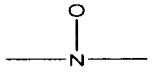
wherein Y may be optionally substituted with one or more substituents selected independently from the group consisting of hydrogen, non-radioactive halogen, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl, C_{1-6} alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl and trifluoromethyl groups;

β represents a radical of formula:

$$(\gamma)_a\text{-}((CR_1R_2)_b\text{-}(V)_c)_d\text{-}((CR_3R_4)_e\text{-}(W)_f)_g\text{-}$$

in which:

a, b, c, d, e, f, g each independently represent an integer from 0 to 10;

γ, V and W each independently represent -NR-$_1$, -O-, -S-,  ethynyl, -CR_1=CR_2-, -(C=O)-, -(C=S)-, -C(=NR_1)-, -C(=O)O-, -(C=S)S-, -C(=NR_1)NR_2-, -CR_1R_2-, -CR_1OR_2-, -$CR_1NR_2R_3$-, where R_1, R_2, R_3 and R_4 are independently selected from the group consisting of hydrogen, halogen, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl (C_{1-6})alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl, and trifluoromethyl groups;

wherein compound (CI) is bound on an -SH group of said peptide sequence (PI).

Claim 5 (Previously Presented): The peptide labeled with fluorine-18 of claim 1, further comprising at its N-terminal end, the amino acid sequence Gly-Ser-Cys or Gly-Cys-Ser.

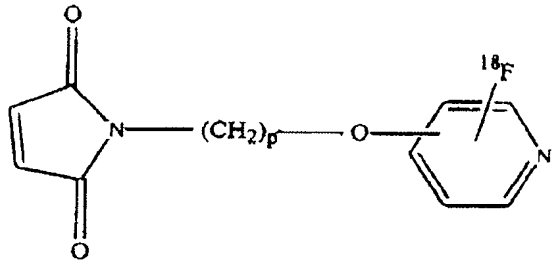
Claim 6 (Previously Presented): The peptide labeled with fluorine-18 of claim 1, further comprising at its N-terminal end, the amino acid sequence Gly-Ser-Gly-Cys (SEQ ID NO: 15), Gly-Cys-Gly-Ser (SEQ ID NO: 16) or Gly-Cys-Gly-Cys (SEQ ID NO: 17).

Claim 7 (Previously Presented): The peptide labeled with fluorine-18 according to claim 1, in which the peptide (PI) is labeled directly with the compound (CI) by coupling the maleimide functional group of the compound (CI) with a free -SH functional group of the said peptide (PI).

Claim 8 (Previously Presented): The peptide labeled with fluorine-18 according to claim 1, in which the peptide (PI) is labeled directly with the compound (CI) by coupling the maleimide functional group of the compound (CI) with a free -SH functional group of a cysteine residue of the peptide sequence (PI).

Claim 9 (Previously Presented): The peptide labeled with fluorine-18 according to claim 1, in which, in the compound of formula (CI), n = 1, and Y is a 3-pyridinyl group.

Claim 10 (Previously Presented): The peptide labeled with fluorine-18 according to Claim 9, in which the compound (CI) corresponds to the following formula (CII):



(CII)

in which p is an integer from 1 to 10.

Claim 11 (Previously Presented): A peptide labeled with fluorine-18 according to Claim 10, in which the compound of formula (CII) is selected from the group consisting of:

1-[2-(2-[^{18}F]fluoropyridin-3-yloxy)ethyl]pyrrole-2,5-dione;

1-[4-(2-[^{18}F]fluoropyridin-3-yloxy)butyl]pyrrole-2,5-dione;

1-[5-(2-[^{18}F]fluoropyridin-3-yloxy)pentyl]pyrrole-2,5-dione;

1-[6-(2-[^{18}F]fluoropyridin-3-yloxy)hexyl]pyrrole-2,5-dione;

1-[(2-[^{18}F]fluoropyridin-3-yloxy)methyl]pyrrole-2,5-dione; and

1-[3-(2-[^{18}F]fluoropyridin-3-yloxy)propyl]pyrrole-2,5-dione.

Claims 12-20 (Canceled)

Claim 21 (Previously Presented): A kit comprising the peptide labeled with fluorine-18 according to claim 1 in form suitable for the analysis and detection of negative charges at the surface of cells.

Claim 22 (Previously Presented): A kit comprising the peptide labeled with fluorine-18 according to claim 1 in form suitable for diagnostic use.

Claim 23 (Previously Presented): A kit comprising the peptide labeled with fluorine-18 according to claim 1 in form suitable for the analysis and detection of microvesicles in blood.

Claims 24-25 (Canceled)

Claim 26 (Previously Presented): A composition comprising a peptide labeled with fluorine-18 according to claim 1 and a pharmaceutically acceptable vehicle.

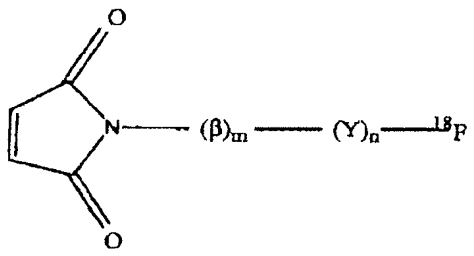
Claim 27 (Previously Presented): A method for detection or analysis of a phospholipid comprising:

contacting a phospholipid with the peptide labeled with fluorine-18 according to claim 1,

and detecting binding, wherein binding indicates the presence of said phospholipid.

Claim 28 (Previously Presented): The method of claim 27, which is positron emission tomography (PET).

Claim 29 (Previously Presented): A peptide labeled with fluorine-18 comprising a peptide sequence described by SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, or 14, wherein said peptide is labeled with a compound (CI) of general formula:



(CI)

in which:

m represents an integer from 0 to 10;

n represents an integer from 0 to 10;

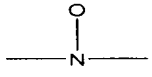
Y represents a group selected from the group consisting of alkyl, imidazolyl, pyrazolyl, benzimidazolyl, pyridinyl, piridazinyl, pyrimidinyl, pyrazinyl, triazinyl, quinolinyl, isoquinolinyl, cinnolinyl, quinazolinyl, quinoxalinyl and purinyl, wherein Y may be optionally substituted with one or more substituents, each of these substituents being selected independently from the group consisting of hydrogen, non-radioactive halogen, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl, C_{1-6} alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl and trifluoromethyl groups;

β represents a radical of formula:

$$(\gamma)_a\text{-}((CR_1R_2)_b\text{-}(V)_c)_d\text{-}((CR_3R_4)_e\text{-}(W)_f)_g\text{-}$$

in which:

a, b, c, d, e, f, g each independently represent an integer from 0 to 10;

γ, V and W each independently represent -NR-$_1$, -O-, -S-,  ethynyl, -CR_1=CR_2-, -(C=O)-, -(C=S)-, -C(=NR_1)-, -C(=O)O-, -(C=S)S-, -C(=NR_1)NR_2-, -CR_1R_2-, -CR_1OR_2-, -$CR_1NR_2R_3$-, where R_1, R_2, R_3 and R_4 are independently selected from the group consisting of hydrogen, halogen, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl (C_{1-6})alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl, and trifluoromethyl groups;

wherein compound (CI) is bound on an -SH group of said peptide sequence (PI).

Claim 30 (Cancelled)

Claim 31 (Currently Amended): The peptide labeled with fluorine-18 of claim [[30]] 1, wherein m and n are not zero.

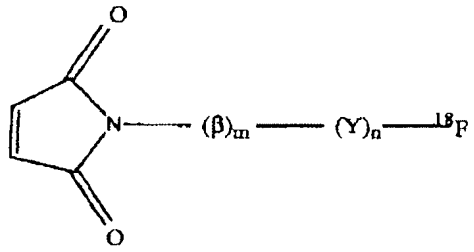
Claim 32 (Currently Amended): The peptide labeled with fluorine-18 of claim [[30]] 1, wherein n = 1, and Y is pyridinyl.

Claim 33 (Currently Amended): The peptide labeled with fluorine-18 of claim [[30]] 1, wherein compound (CI) is directly bound via the maleimide group to a cysteine residue in said peptide sequence (PI).

Claim 34 (New): A peptide labeled with fluorine-18 comprising:

a peptide sequence (PI) described by SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, or 14,

wherein said peptide is labeled with a compound (CI) of general formula:



(CI)

in which:

m represents an integer from 0 to 10;

n represents an integer from 0 to 10;

Y represents a group selected from the group consisting of alkyl, imidazolyl, pyrazolyl, benzimidazolyl, pyridinyl, piridazinyl, pyrimidinyl, pyrazinyl, triazinyl, quinolinyl, isoquinolinyl, cinnolinyl, quinazolinyl, quinoxalinyl, and purinyl,

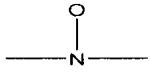
wherein Y may be optionally substituted with one or more substituents selected independently from the group consisting of hydrogen, non-radioactive halogen, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl, C_{1-6} alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl and trifluoromethyl groups;

β represents a radical of formula:

$$(\gamma)_a\text{-}((CR_1R_2)_b\text{-}(V)_c)_d\text{-}((CR_3R_4)_e\text{-}(W)_f)_g\text{-}$$

in which:

a, b, c, d, e, f, g each independently represent an integer from 0 to 10;

γ, V and W each independently represent -NR-$_1$, -O-, -S-, 

ethynyl, -CR_1=CR_2-, -(C=O)-, -(C=S)-, -C(=NR_1)-, -C(=O)O-, -(C=S)S-, -C(=NR_1)NR_2-, -CR_1R_2-, -CR_1OR_2-, -$CR_1NR_2R_3$-, where R_1, R_2, R_3 and R_4 are independently selected from

the group consisting of hydrogen, halogen, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl (C_{1-6})alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl, and trifluoromethyl groups;

wherein compound (CI) is bound on an -SH group of said peptide sequence (PI).

Claim 35 (New): A method for detection or analysis of a phospholipid comprising:

contacting a phospholipid with a peptide labeled with fluorine-18, and

detecting binding, wherein binding indicates the presence of said phospholipid;

wherein said peptide labeled with fluorine-18 comprises the following peptide sequence (SEQ ID NO: 18):

J^1-J^2-J^3-J^4-J^5-J^6-Asp-U^8-J^9-J^{10}-U^{11}-Arg-J^{13}-Ala-U^{15}-Lys-Gly-X^{18}-Gly-Thr-J^{21}-Glu-J^{23}-J^{24}-U^{25}-J^{26}-J^{27}-J^{28}-U^{29}-J^{30}-J^{31}-Arg-J^{33}-J^{34}-J^{35}-J^{36}-B^{37}-Gln-J^{39}-U^{40}-J^{41}-J^{42}-J^{43}-U^{44}-J^{45}-J^{46}-J^{47}-J^{48}-J^{49}-Arg-J^{51}-U^{52}-J^{53}-J^{54}-Asp-U^{56}-Lys-Ser-Z^{59}-Leu-J^{61}-Gly-J^{63}-J^{64}-Z^{65}-J^{66}-J^{67}-U^{68}-J^{69}-J^{70}-J^{71}-U^{72}-J^{73}-J^{74}-Ser

in which J, Z, U, X and B represent amino acids such that:

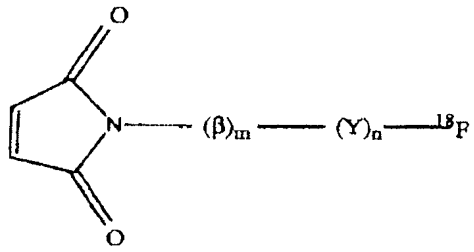
- the amino acids J are chosen independently of each other in such a manner that at least 50% of them are polar residues selected from the group consisting of Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Lys, Orn, Pro, Ser, Thr and Tyr,
- the amino acid X^{18} is chosen independently of the other amino acids of the sequence from the group consisting of Ala, Asn, Cys, Gln, Gly, His, Ile, Leu, Met, Phe, Ser, Thr, Trp, Tyr and Val,
- the amino acids Z^{59} and Z^{65} are chosen independently from the group consisting of Glu, Asp, Lys and Arg,

- the amino acids U and B of the sequence (I) are selected according to one of Examples a) to j) presented in Table 1 below:

	U^{8}	U^{11}	U^{15}	U^{25}	U^{29}	B^{37}	U^{40}	U^{44}	U^{52}	U^{56}	U^{68}	U^{72}
Ex a)	Val	Leu	Met	Ile	Leu	Arg	Ile	Tyr	Leu	Leu	Val	Leu
Ex b)	Ala	Ile	Ile	Ile	Leu	Arg	Ile	Tyr	Leu	Leu	Ile	Leu
Ex c)	Ala	Ile	Ile	Ile	Leu	Arg	Ile	Tyr	Leu	Leu	Met	Val
Ex d)	Ala	Leu	Met	Leu	Leu	Arg	Ile	Tyr	Leu	Leu	Ile	Met
Ex e)	Ala	Leu	Met	Ile	Ile	Arg	Val	Tyr	Leu	Leu	Ile	Met
Ex f)	Ala	Leu	Met	Ile	Ile	Arg	Ile	Phe	Leu	Leu	Ile	Met
Ex g)	Ala	Leu	Met	Ile	Val	Arg	Ile	Phe	Leu	Leu	Ile	Phe
Ex h)	Val	Leu	Met	Ile	Leu	Arg	Ile	Phe	Leu	Leu	Ile	Met
Ex i)	Ala	Leu	Met	Ile	Leu	Arg	Ile	Phe	Leu	Leu	Ile	Met
Ex j)	Ala	Leu	Met	Ile	Leu	Arg	Ile	Tyr	Leu	Leu	Ala	Ala
Ex k)	Val	Leu	Met	Ile	Leu	Arg	Ile	Tyr	Leu	Leu	Val	Leu
Ex l)	Val	Leu	Met	Ile	Leu	Arg	Ile	Phe	Leu	Leu	Val	Leu

wherein the superscripts of J, Z, U, X and B represent the positions of these amino acids in said sequence, and

wherein said peptide is labeled directly or indirectly with a compound (CI) of general formula:



(CI)

in which:

- m represents an integer from 0 to 10;
- n represents an integer from 0 to 10;
- Y represents a group selected from the group consisting of alkyl groups, monocyclic or bicyclic heterocyclic groups chosen from imidazolyl, pyrazolyl, benzimidazolyl, pyridinyl, piridazinyl, pyrimidinyl, pyrazinyl, triazinyl, quinolinyl, isoquinolinyl, cinnolinyl, quinazolinyl, quinoxalinyl and purinyl groups,

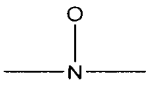
wherein Y may be optionally substituted with one or more substituents

selected independently from the group consisting of hydrogen, (nonradioactive) halogens, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl, C_{1-6} alkoxycarbonyl, aryloxycarbonyl, C_{1-6} alkylaminocarbonyl, arylaminocarbonyl and trifluoromethyl groups;

- β represents a radical of formula:

$$(\gamma)_a\text{-}((CR_1R_2)_b\text{-}(V)_c)_d\text{-}((CR_3R_4)_e\text{-}(W)_f)_g\text{-}$$

in which:

- a, b, c, d, e, f, g each independently represent an integer from 0 to 10, such as 0, 1, 2, 3, 4, 5, 6, 7, 8, 9;
- γ, V and W each independently represent $-NR_1$-, -O-, -S-, 

ethynyl, $-CR_1=CR_2$-, -(C=O)-, -(C=S)-, $-C(=NR_1)$-, -C(=O)O-, -(C=S)S-, $-C(=NR_1)NR_2$-, $-CR_1R_2$-, $-CR_1OR_2$-, $-CR_1NR_2R_3$-, where R_1, R_2, R_3 and R_4 are independently from the group consisting of hydrogen, halogens, phenyl, C_{1-6} alkyl, C_{1-6} alkoxy, aryloxy, amino, mono- or di(C_{1-6} alkyl)amino, mono- or di(aryl)amino, thio, C_{1-6} alkylthio, arylthio, formyl, C_{1-6} alkylcarbonyl, arylcarbonyl, carbonyl (C_{1-6})alkoxycarbonyl, aryloxycarbonyl,

C_{1-6} alkylaminocarbonyl, arylaminocarbonyl and trifluoromethyl groups, directly or indirectly on an -SH functional group.